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Comprehensive eye exams in children aged six years or younger

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Contents

Trends over time

In 2016, more children aged four and five years in the Health Unit region received a comprehensive eye exam, compared to Ontario children of the same age (41% in the Health Unit region, compared to 34% in Ontario; Figure 1 and Table 1). The percentage of children aged four and five years in the Health Unit Region who received a comprehensive eye exam increased by nine percentage points between 2013 and 2015, before levelling off in 2016.

The percentage of children aged 0 to 3 years who received a comprehensive eye exam climbed steadily between 2012 and 2016 in both the Health Unit region and Ontario, though by smaller margins compared to children aged four and five year olds. In 2016, about 18% of children aged 0 to 3 years in the Health Unit region received a comprehensive eye exam, significantly higher compared to 12% of Ontario children of the same age.

Figure 1. Percentage of children who received comprehensive eye exams, by age group and health region, 2012-2016

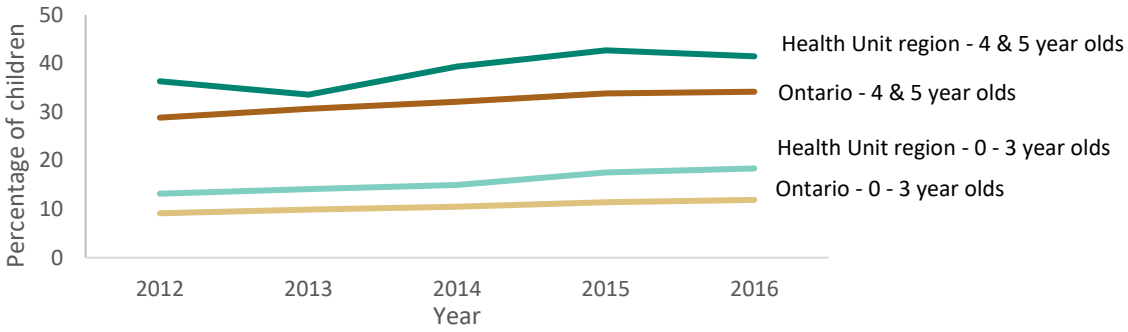

Table 1. Percentage of children aged 4 and 5 years who received comprehensive eye exams, by health region, 2012-2016

Year	Health Unit region	Ontario
2012	36.3* (33.9, 38.8)	28.8 (28.6, 29.0)
2013	33.6* (31.3, 36.0)	30.7 (30.5, 30.9)
2014	39.3* (36.9, 41.9)	32.1 (31.9, 32.3)
2015	42.7* (40.1, 45.4)	33.8 (33.6, 34.0)
2016	41.4* (38.8, 44.2)	34.2 (34.0, 34.4)

Table 2. Percentage of children aged 0 – 3 years who received comprehensive eye exams, by health region, 2012-2016

Year	Health Unit region	Ontario
2012	13.2* (12.1, 14.3)	9.1 (9.1, 9.2)
2013	14.1* (13.1, 15.3)	9.9 (9.8, 10.0)
2014	15.0* (13.8, 16.2)	10.5 (10.4, 10.6)
2015	17.5* (16.3, 18.8)	11.4 (11.3, 11.5)
2016	18.4* (17.1, 19.7)	11.9 (11.8, 12.0)

* The percentage is significantly different than the Ontario percentage during the corresponding calendar year

Trends by sex

Between 2012 and 2016, the percentage of children aged four and five years old and children aged three years or younger who received comprehensive eye exams did not vary by sex, in either the Health Unit region or Ontario (Tables 3 and 4).

Table 3. Percentage of children aged four and five years who received comprehensive eye exams, by sex, year and health region, 2012-2016

Year	Health Unit region – Males	Health Unit region – Females	Ontario – Males	Ontario – Females
2012	34.9* (31.7, 38.4)	37.9* (34.4, 41.6)	28.8 (28.5, 29.0)	28.9 (28.6, 29.2)
2013	32.6 (29.5, 35.9)	34.6* (31.3, 38.1)	30.6 (30.3, 30.9)	30.8 (30.5, 31.1)
2014	37.4* (34.0, 41.1)	41.2* (37.7, 45.0)	31.8 (31.5, 32.1)	32.4 (32.1, 32.7)
2015	41.1* (37.5, 45.0)	44.2* (40.5, 48.1)	33.7 (33.4, 34.0)	34.0 (33.7, 34.3)
2016	39.0* (35.4, 42.7)	44.0* (40.2, 48.1)	33.8 (33.5, 34.1)	34.5 (34.2, 34.8)

* The percentage is significantly different than the Ontario percentage during the corresponding calendar year

Table 4. Percentage of children aged 0-3 years who received comprehensive eye exams, by sex, year and health region, 2012-2016

Year	Health Unit region – Males	Health Unit region – Females	Ontario – Males	Ontario –Females
2012	13.3 (11.9, 14.9)	13.0* (11.6, 14.6)	9.1 (9.0, 9.2)	9.2 (9.1, 9.3)
2013	13.9 (12.4, 15.5)	14.4* (12.9, 16.1)	9.9 (9.8, 10)	9.9 (9.8, 10.1)
2014	15.6 (14.0, 17.3)	14.3* (12.8, 16.0)	10.5 (10.3, 10.6)	10.5 (10.4, 10.6)
2015	17.6 (15.9, 19.4)	17.5* (15.7, 19.4)	11.3 (11.2, 11.4)	11.5 (11.4, 11.6)
2016	18.9* (17.1, 20.7)	17.8* (16.1, 19.7)	11.8 (11.7, 11.9)	12.0 (11.9, 12.1)

* The percentage is significantly different than the Ontario percentage during the corresponding calendar year

Trends by age

In 2016, the percentage of children who received comprehensive eye exams increased with age (Figure 2 and Table 4). The largest increase occurred between the ages of two and four years, with the percentage of eye exams in children aged four years being more than double the percentage of children aged two years in either region.

Figure 2. Percentage of children who received comprehensive eye exams, by age and health region, 2016

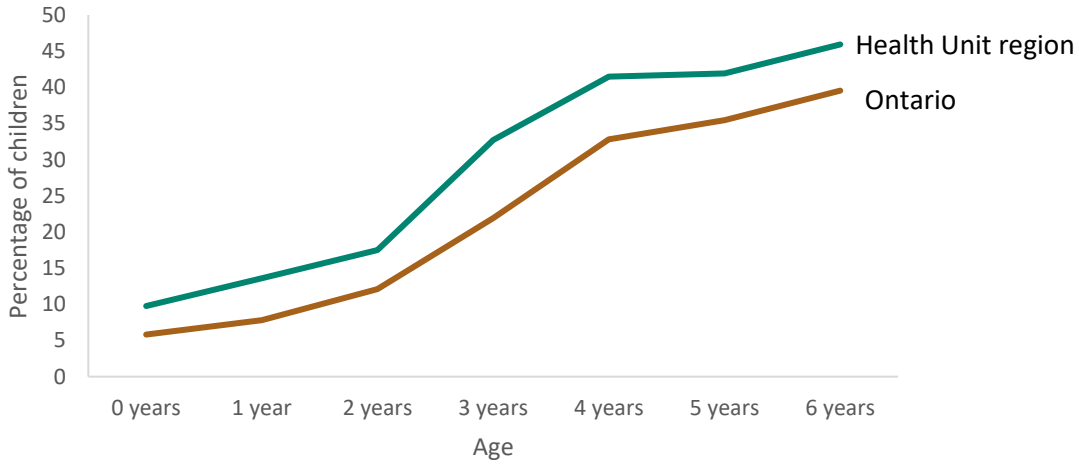

Table 5. Percentage of children who received comprehensive eye exams, by age and health region, 2016

Age (Years)	Health Unit region	Ontario
0 (i.e., less than 1)	9.8* (8.0, 11.8)	5.8 (5.7, 5.9)
1 year	13.6* (11.5, 16.0)	7.8 (7.7, 8.0)
2 years	17.5* (15.1, 20.1)	12.1 (11.9, 12.3)
3 years	32.7* (29.4, 36.3)	21.9 (21.7, 22.2)
4 years	41.5* (37.8, 45.4)	32.8 (32.5, 33.1)
5 years	41.9* (38.3, 45.9)	35.5 (35.2, 35.8)
6 years	45.9* (42.1, 50.0)	39.5 (39.2, 39.9)

* The percentage is significantly different than the Ontario percentage during the corresponding calendar year

Definitions and data sources

Comprehensive eye exams:

Percentage of children who received comprehensive eye exams administered by optometrists, opthamologists, and physicians identified as fee-for-service Ontario Health Insurance Plan (OHIP) claims for oculo-visual minor assessment (fee code: V402), periodic oculo-visual assessment (fee code: A110 & V404), or special opthalmological assessment (fee code: A251), with a valid health card during the corresponding calendar year.

Children seen at a community health centre (CHC) are excluded from this measure as CHC physicians do not submit billing claims to OHIP. CHCs in the Health Unit region include the West Nipissing Community Health Centre and the North Bay Nurse Practitioner Led-Clinic.

Data sources:

Comprehensive eye exams: Ontario Medical Services Data [2012-2016], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario, Date extracted: [August 30, 2018].

Population estimates: Population Estimates [2012-2016], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date extracted: [November 3, 2017].

Analysis:

Confidence intervals: Confidence intervals (CI) and variances were estimated using the poisson distribution in STATA IC/14.2 (2014) for all regions.

Interpretation of a significant difference: A statistic interpreted as 'significantly different' from another is an estimate found to be statistically meaningful; the difference is unlikely due to chance. Error ranges noted in tables within this report illustrate 95% confidence intervals. If there is no overlap in range between confidence intervals, the difference can be described as statistically significant.